



## Information on Hantavirus Pulmonary Syndrome (HPS)

**What is hantavirus?** It is a virus that can cause a serious, often deadly, respiratory illness called Hantavirus Pulmonary Syndrome or HPS. Hantavirus is spread by wild rodents, mainly infected deer mice in the West and the cotton rat in the Southeast.

Hantavirus was first reported in the United States in the spring of 1993 after an outbreak in the "four corners" area of the American southwest. Through April, 1998 a total of 183 cases of HPS have been reported in the U.S. Almost half of all cases ever reported, or 43.7% have resulted in death. A total of 103 cases have been reported since January 1, 1994, after the well-known 1993 outbreak receded. When this group is considered alone, the proportion of deaths drops to 33%. Cases have been reported in 29 states, including most of the western half of the country and some eastern states as well.

**How is a person exposed to hantavirus?** Wild rodents, such as deer mice, are the main carriers of hantavirus. Deer mice live in all parts of Idaho, but mainly in rural areas. Deer mice can be 4-9 inches long from head to the tip of the tail, have oversized ears, and white fur on their bellies. Infected rodents spread the virus in their urine, saliva, droppings, and nesting materials. The mice can have the virus without showing signs of being sick.

A person can be exposed to hantavirus by coming in contact with droppings or with things that deer mice have come in contact with, eaten, or lived in. The virus can get into the air as mist from urine and saliva or dust from droppings. Disturbing nests of mice or sweeping up dry droppings can spread the virus through the air. Breathing in the virus is the most common way of becoming infected; however, you can also become infected by touching the mouth or nose after handling contaminated materials.

### **What are the symptoms of HPS and how long after infection do they appear?**

Symptoms of HPS usually appear within 2 weeks of infection but can appear as early as 3 days to as late as 6 weeks after infection. The first symptoms can be flu-like including: fatigue, a fever (101E-104E F); and muscle aches, especially the large muscle groups: thighs, hips, back, and sometimes shoulders (these symptoms are universal). There may also be headache; abdominal pain; sometimes nausea and vomiting. ***The primary symptom of this disease is difficulty breathing, which is caused by fluid build-up in the lungs and quickly progresses to an inability to breathe.***

**What should you do if you think you have HPS?** If any of the symptoms described above, especially difficulty in breathing appear after direct or indirect exposure to rodents, ***contact your doctor immediately.***

**Is there a cure for, or a vaccine against hantavirus infection?** No cure or vaccine is yet available against hantavirus infection. The sooner after infection medical treatment is sought, the better the chance of recovery.

**How can I prevent hantavirus infection?** Avoid contact with rodents. Take steps to keep mice away from your home and workplace. Remove food that attracts mice and remove their nesting places. Be careful when cleaning places where mice have fed or nested. Take precautions when camping or staying outdoors. **See the individual recommendations listed on page 2 of this document.**

**Keep mice away.** Take away their food! Do not store pet food uncovered or in open feeding dishes. Store grains and animal feed in containers with tight fitting covers. Use a plastic trashcan with a lid for kitchen garbage and food scraps.

**Keep mice out of your house.** Plug up, screen, or cover all openings into your home that a mouse might get through (bigger than a 1/4 inch wide). Use steel wool to plug holes around the base of buildings. Use spring-loaded mousetraps. If you use poison bait, follow directions carefully. **Wear gloves when handling dead mice.**

**Keep mice out of your yard.** Keep the area within 100 feet of your house clear of piles of wood, junk, or debris. Keep weeds, brush and grass cut short. Tightly cover outdoor garbage cans and raise them 12 inches off the bare ground. Stack firewood, lumber and hay 12 inches off the bare ground and as far from the house as possible. Use mousetraps near woodpiles and haystacks.

### **When outdoors or camping.**

- Avoid contact with rodents. Do not feed them. Do not disturb rodent dens or nests.
- Stay out of cabins or shelters until they are cleaned and disinfected. (*See below*).
- Pitch tents well away from garbage cans, woodpiles or other places rodents live.
- Avoid areas where you see burrows or rodent droppings.
- Use a tent with a floor. Do not sleep on the bare ground.
- Keep food and scraps in tightly covered containers. Put all trash in covered garbage cans.
- Clean dishes and cooking utensils immediately after use.
- When harvesting crops or hay, wear gloves and protective clothing.

### **How to clean infected areas.**

Follow these steps if you are cleaning up places in your home or any place where mice have fed, left droppings or nested.

- Wear latex or rubber gloves. **It's important to avoid stirring up any dust.**
- Mix a solution of 1 cup of bleach to 10 cups water or use a household disinfectant.
- ***Do not vacuum, sweep, or dust!*** This may spread the virus through the air. Use rags, sponges, and mops that have been soaked in the disinfectant solution.
- Thoroughly spray or soak any dead mice, droppings, or nesting areas with disinfectant.
- Wipe down counter tops, cabinets and drawers. Mop floors and baseboards.
- Steam clean carpets, rugs and upholstered furniture.
- Wash clothes and bedding in hot water and detergent. Set the dryer on high.
- Dispose of contaminated items, including dead mice, in a plastic bag. Seal the bag and place it in another plastic bag. Seal the outer bag and dispose of it in an outdoor garbage can or bury it in a hole at least two feet deep.
- Disinfect or throw away the gloves used for clean up.
- When you are done, wash your hands and arms and/or shower with soap and hot water.

### **If you are cleaning out a building that has been closed up, such as a cabin, shed, or garage:**

- Air out the building for at least 30 minutes by opening doors and windows. Leave the building while it is airing out.
- Always wear gloves. **Avoid stirring up any dust while cleaning.**
- Follow the steps listed above.
- Spray dirt floors with the bleach or disinfectant solution.

*If you have questions, please call your doctor or local health department.*

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